Roy F. Weston, Inc. Suite 3, 5090 Central Highway, Pennsauken, NJ 08109 • (609) 663-7995

TECHNICAL ASSISTANCE TEAM FOR EMERGENCY RESPONSE REMOVAL AND PREVENTION
EPA CONTRACT 68-01-6669

MEMORANDUM

TO: Benton Wilmoth, OSC, U.S. EPA Region III

FROM: (b) (4) ol, TAT, Region III

TDD# 8410-05

DATE: 10/23/84 PCS# 3005

SUBJECT: Preliminary Assessment - Schaffer Electric Company PCB Site in Minden, West Virginia

Background

West Virginia Department of Natural Resources (DNR) inspector Leroy Gilbert discovered the Schaffer Electric Company (SECO) Site in late September 1984. During his initial inspection he observed several hundred transformers and capacitors in close proximity to the small coal camp of Minden, West Virginia. A four point composite and a grab sample from the drainage ditch to Arbuckle Creek were collected. The samples revealed 26,749 ppm PCB and 1,136 ppm PCB respectively.

Findings

On October 3, 1984 TAT members (b) (4) , (b) (4) and (b) (4) met with West Virginia DNR inspectors Leroy Gilbert and Rob Jelacic. The assessment team met with the property owner and secured permission to conduct the assessment. Schaffer Electric Company is an operating firm that builds electricl substations for the local coal mining industry. Many of their units incorporated various sizes of transformers, capacitors, switches and other voltage regulation/distribution devices. Mrs. Schaffer instructed her forklift operator to separate the useable transformers in the yard from the ones they had no use for. The operator initiated this operation while the assessment team was present.

A total of approxiately 150 transformers and 50 capacitors were observed. Most of the capacitors were laying on their sides. Several capacitors had broken insulators with heavy oil spillage in the vicinity. Evidence that at least 2 transformers were initially filled with PCB fluids was obtained from nameplate inspections; "chlorextol" and "pyranol" labels were observed.

A total of 8 soil/sediment samples were obtained during the assessment. Sediment samples were taken in Arbuckle Creek upstream and downstream of the confluence of the main drainage ditch. In the main capacitor spillage area, a surface sample and a 12" core sample were obtained. Both samples were saturated with oil. The remaining samples were taken throughout the site

ORIGINAL
(Red)

The samples were packed into a cooler and transported to the TAT Region III office. Chain-of-custody protocols were followed throughout transport and shipping of samples.

All samples were shipped to Martel Laboratories in Baltimore, Maryland for rapid turnaround PCB analysis using EPA method 8080. Verbal results are expected by 10/30/84.

Attachments:
1) Site sketches
2) Chain-of-custody
3) Photographs

ORIGINAL
(Red)

[illegible] HAZARDOUS WASTE SITE INSPECTION

Assignor: (b) (4) [redacted]

TDD NO. 03-8410-05

Date of Inspection: 10-3-84

PCS # 3005

Site Name: Schaefer Equipment Co.

Site Address: Street No. Box 310

City Nuttall

State West Virginia Zip Code 25877

County Fayette

Directions to site: U.S. Route 19 to Oak Hill, WV. Circle Rd east. East to Main Street. Turn Right onto Main. Turn Right onto Minden Road (WV Route 19). Turn Right onto gravel road just before entering Minden

Is site access controlled? NO

By what means?

Contact to gain access? ANNA Shaffer or Robert MAYNOR
(304) 469-3381

Hazardous Conditions:

CONDITION	OBSERVED	POTENTIAL	NONE
Surface Water Contamination		✓	
Groundwater Contamination		✓	
Air Contamination		✓	
Fire/Explosion		✓	
Direct Contact		✓	
Soil Contamination	✓		
Drinking Water Contamination			✓

COMMENTS: Record of who sold transformers to SECO Inc. Available but were not reviewed.

[illegible] Investigation
Page [illegible]

SID NO. [illegible]

ORIGINAL
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Owner:

Name Schaffer Equipment Co.

Street Box 310 City Minden

State West Virginia Zip Code 25877

Telephone (304) 467-3381

Operator: (If different from Owner)

Name

Street City

Other agency contact(s) for information

Area Terrain: Floodplain of Arbuckle Creek

Newest Navigable Waterway: Distance 1 - 1½ miles Name: New River - a heavily used recreational river

Is site sketch attached? yes

Was air monitoring performed? yes

Using what instruments? Century Organic Vapor Analyzer (OVA)

By Whom? TAT member (b) (4) [redacted]

Were instruments calibrated? yes

Readings noted: background 1.4 ppm

Were samples taken? yes Is sample plan attached? yes

Description: soil / sediment samples for PCB analyses

Where analyzed (what lab?)

Were photographs taken? yes

By whom? (b) (4) [redacted]

Description of adjacent properties: residential - at least 20 houses within ¼ mile radius.

Estimated population in 1/4 mile: 65 - 75

ORIGINAL
(Red)

Hazardous Waste Site Investigation
Page 3

WD No. 03-8410-05

Waste Properties:

a) Specific Substances (TLV's):

b) State (solid, etc.): transformer oils, contaminated soil, unknown drum contents

c) Characteristics (toxic, etc.):

d) Containers:

1) Type:	Transformers	CAPACITORS	drums
2) Number:	129	59	63
3) Condition:	new - poor	old, broken	good & poor
4) Labeling:	PCB labels observed ("Pyranol" "Chlorextol")		

Site Status: Active/Inactive Active - build underground electrical substations/switch houses.

Years of Operation: 14 Begin 1970 End on-going

Is background information attached? None available

Representative of other agency on site visit:

Leroy L. Gilbert, WV DNR Inspector

Robert W. Maynor - Manager Shaffer Equipt. Co.

Robert Telacic - WV DNR Hazardous Waste Div

Assessment performed by: (b) (4) [redacted]

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 3
Curtis Bldg., 6th & Walnut Sts.
Philadelphia, Pennsylvania

CHAIN OF CUSTODY RECORD

PROJ. NO.

PROJECT NAME [illegible]

SAMPLERS: *(Signature)* [redacted]

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CON-TAINERS	[illegible]						REMARKS
01				✓	Arbuckle Creek Sediment downstream of drainage ditch	1	1						
02				✓	Drainage ditch ~125' up [illegible] of Arbuckle Creek	1	1						
03			✓	✓	Area K - 4 point composite	1	1						
04				✓	Area E - [illegible]	1	1						
05				✓	Area E - 12" core depth	1	1						
06				✓	Area G	1	1						
07				✓	Arbuckle Creek sed upstream of drainage ditch	1	1						
08				✓	Area A	1	1						
✓				✓	Sample Blank	1	1						

Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
[illegible]	10/15/84 1025	[redacted]			

Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
	10/11/84 1050				

Relinquished by: *(Signature)*	Date / Time	Received for Laboratory by: *(Signature)*	Date / Time	Remarks

ORIGINAL (Red)

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

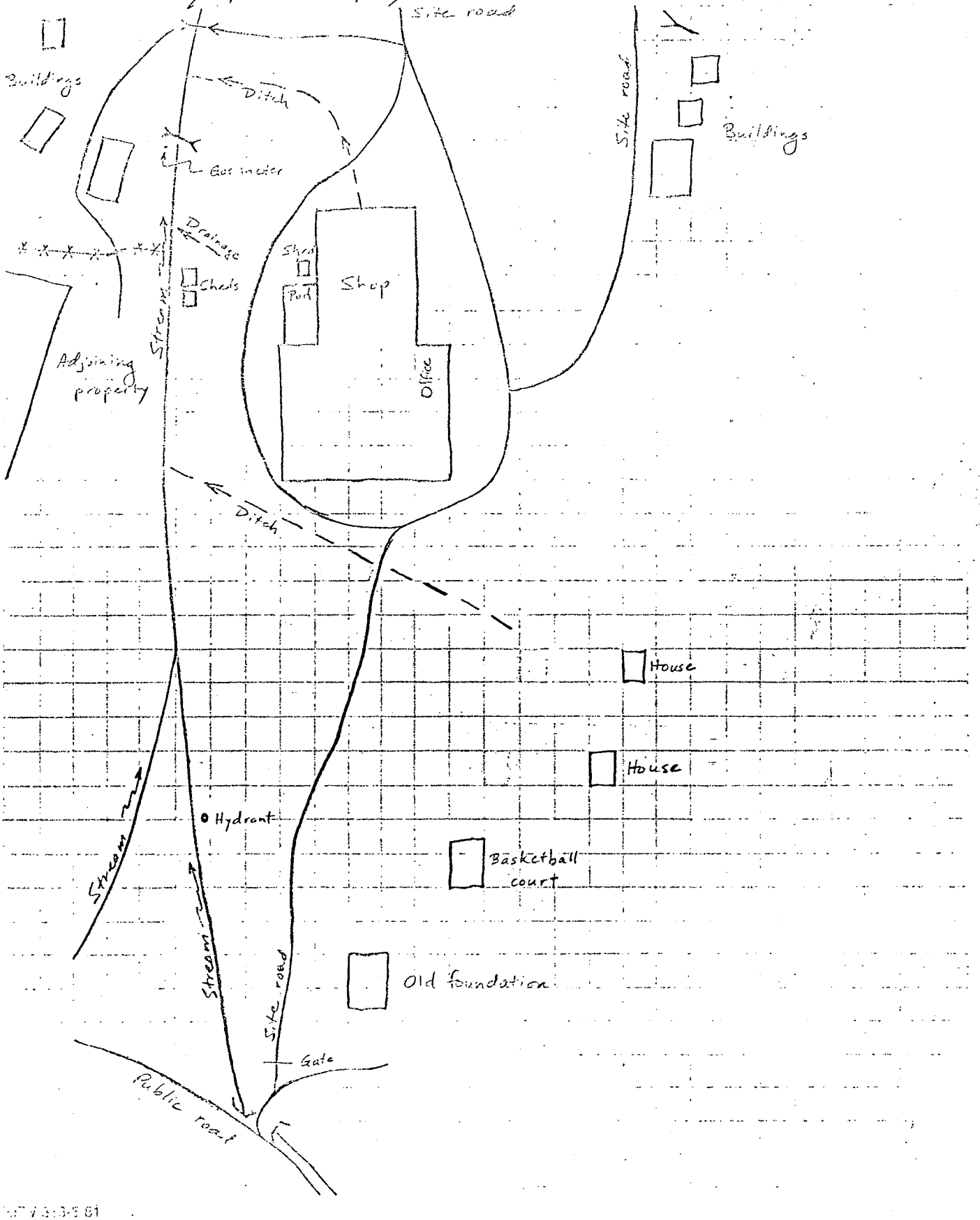
3-12630

SHEET _____ OF _____

W.O. NO. _____

ORIGINAL (Red)

SUBJECT Shaffer Equipment Company: Site Sketch (Structures)

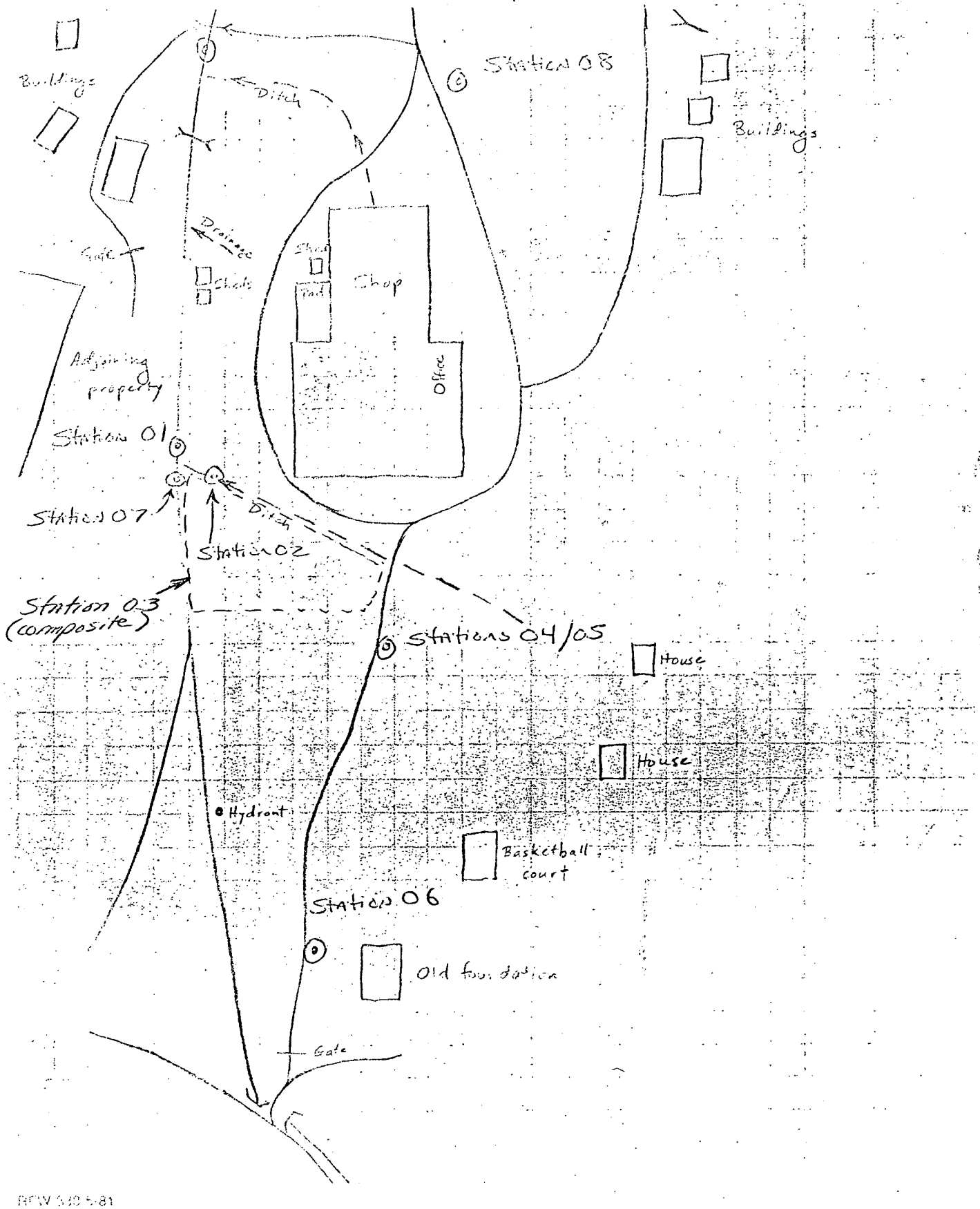


ORIGINAL (Red)

BY _____ DATE _____ CK'D _____ SHEET _____ OF _____

PROJECT _____ DEPT _____ W.O. NO. _____

SUBJECT Schaffer Electric - Sample Locations



BY _____ DATE _____ CHK'D BY _____ DATE _____ DEPT _____ SHEET _____ OF _____

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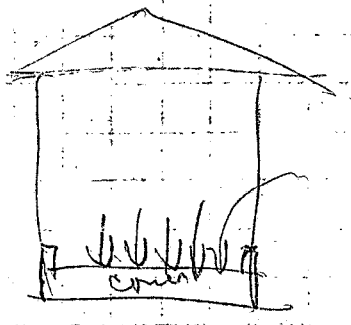
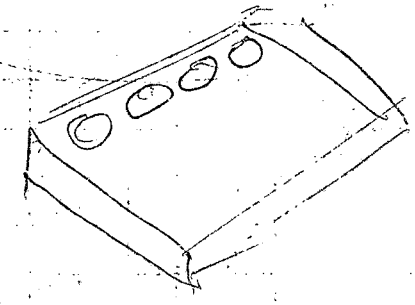
W.O. NO. _____

JOB NO. _____

SUBJECT Shaffer Equipment Company

Count of containers by type & location





Area	Transformers	Capacitors	"Enclosures" & other "boxes" that might contain oil	55-gal. drums	30±-gal. drums	5-gal. drums	Other
TOTAL:	129	59	59	69	5	4	
A	7						
B			12				
C	3						
D	10		2				
E	2	27	13	23	1		boiler (12' horiz. length, 6' dia.)
F			19	16			
G	39		5				
H			3				
I	7	29	3	27	2		
J	1		1				large scrap pile; 5 oil cut-outs (transformer is empty, not clean)
K	60	3	1				
L				3	2	4	1 capacitor housing & apparent inner parts of several capacitors (white solids in layers)

REV 3-6-5-81

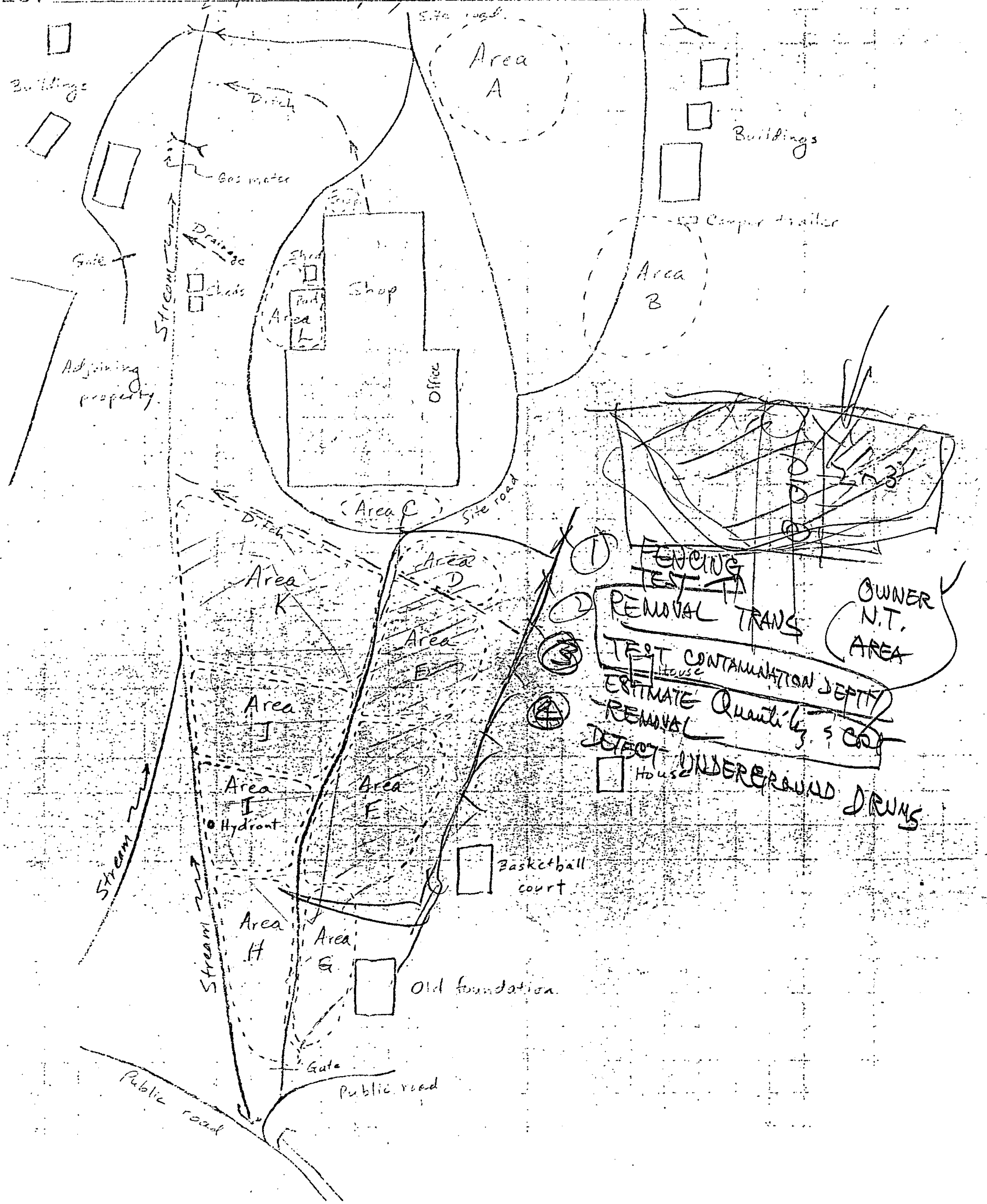
BY _KSP_ DATE _11/3/87_ DIV. ______ SHEET ______ OF ______

ORIGINAL (Red)

CHKD. BY ______ DATE ______ DEPT ______ W.O. NO. ______

PROJECT ______

SUBJECT _Shaffer Equipment Company: Site Sketch (Containers)_



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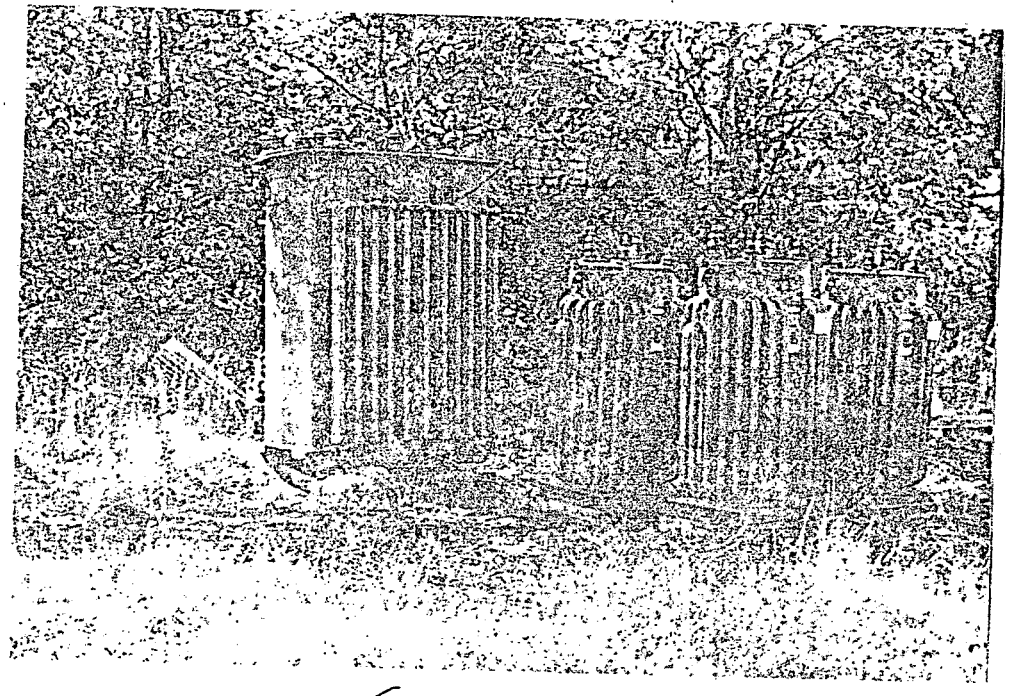
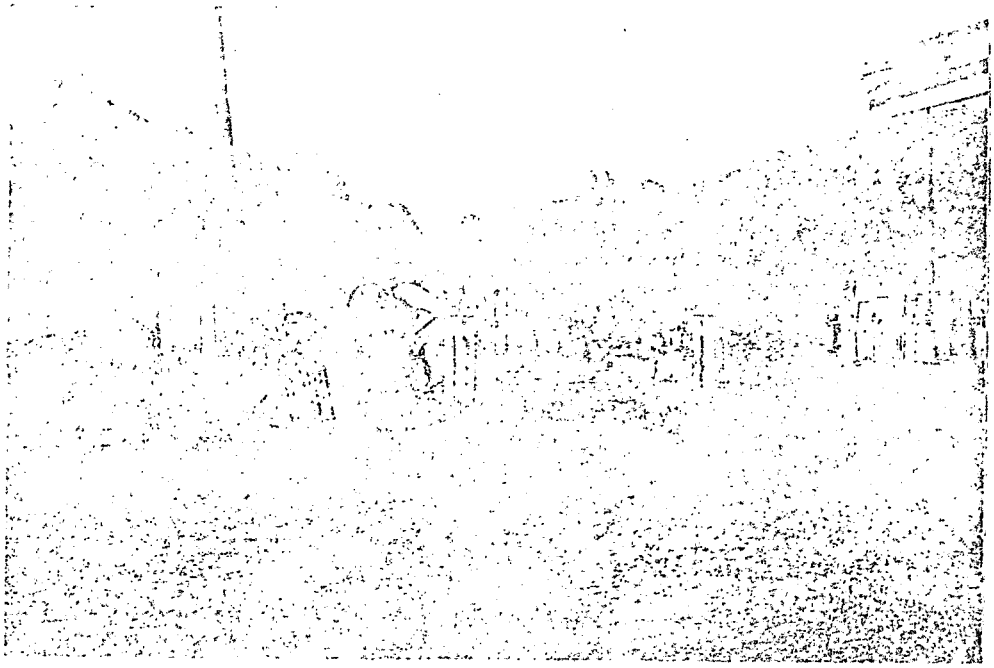
(Red)

1. Main Entrance road. Note large transformers in front of boat on right.



2. Large transformers in Area A are stored on pallets.

ORIGINAL
(Red)



3. GENERAL VIEW OF THE SITE. NOTE RANDOM STORAGE OF UNITS IN THE VARIOUS AREAS.

4. CLOSE-UP OF #3.

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ORIGINAL (Red)

TECHNICAL ASSISTANCE TEAM FOR EMERGENCY RESPONSE REMOVAL AND PREVENTION
EPA CONTRACT 68-01-6669

MEMORANDUM

TO: Robert Caron, OSC, EPA Region III PCS# 3144

THRU: Thomas I. Massey, Chief TDD# 8411-42
Emergency Response Section

THRU: Richard Habrukowich, TATL, Region III

FROM: Garrett Arai, TATM, Region III
Anne Marie Gohsler, TATM, Region III

DATE: December 20, 1984

RE: Schaeffer Electric Site Assessment

Background

The Schaeffer Equipment Company Site was discovered by inspector Leroy Gilbert of the West Virginia Department of Natural Resources (DNR) in late September, 1984. During his initial inspection he observed several hundred transformers and capacitors in close proximity to the small coal camp of Minden, West Virginia. Samples revealed PCBs up to 1,136 ppm. Subsequently, EPA and TAT conducted a preliminary site assessment on October 3, 1984. A total of 8 soil/sediment samples were collected at that time. Samples ranged from 3.0 ppm to over 200,000 ppm PCBs. Additional soil/sediment samples were collected on November 1, 1984. A total of 105 samples were obtained from baseline stations, core samples, runoff ditches and Arbuckle Creek. Results ranged from less than one ppm to more than 200,000 ppm PCBs. When plotted, the results revealed several "hot" spots on site and a gradual off-site migration of PCBs. All lab analysis was done by Martel Labs of Baltimore, Maryland.

Situation

OSC Bob Caron directed the TAT to conduct an additional site assessment since the drums on the Schaeffer property had not been sampled during either of the first two assessments. It was determined that three drum samples would be adequate. In addition, a meeting with officials from the State of West Virginia was held on December 5, 1984. The following people and agencies were represented:

Robert E. Caron	EPA/OSC
Steven J. Knopp	WV Office of Attorney General
Ronald A. Shipley	WV Dept. of Natural Resources
Dr. Abduhl A. Quazi	WV Dept. of Health
Pamela Hayes	WV DNR/Water
Steven Wright	WV DNR
(b) (4) [redacted]	Weston TAT
[redacted]	Weston TAT

Situation (continued)
Highlights of the meeting included the following:

1) Sampling results and analysis from the sampling assessment performed on 11/1/84.

2) QA/QC of data

3) WV DNR's position of the Schaeffer Electric situation from legal standpoints.

4) WV Health Department's stance and certification.

5) WVDNR's request for Federal assistance.

6) Public Relations coordination through State and EPA agreements.

7) Possibility of a planned removal.

8) Immediacy of threat as indicated through the analysis.

The sampling results proved to be the key in the discussions because of the high values of PCB's contained, and the nature of the materials migrating from the site. The quality assurance/quality control provided by the laboratory was a concern of WVDNR. These concerns were well entertained and justly supported by substantiating documents.

The State's legal department has no regulatory capacity to enforce cleanup since the State of West Virginia does not regulate PCB's. The State also expressed a concern over the possibility of a planned removal situation and did not want this situation to occur again. The State expressed a desire to be involved in all facets of the project. Communications between all agencies were emphasized as extremely important in this matter.

Dr. Quazi of WV Health Department and Pam Hayes of WVDNR were the key people in certification of the threat posed by this site and will forward the State's position on this situation to the EPA. In addition, they will submit a formal request for assistance.

ORIGINAL
(Red)

Situation (continued)
On December 6, 1984 TAT performed a drum assessment and sampling of the Schaeffer Electric property. Three (3) drums were sampled and the results were as follows:

Station 01	2.0 ppm	PCB (Aroclor 1260)
Station 02	147.0 ppm	PCB (Aroclor 1260)
Station 03	5.7 ppm	PCB (Aroclor 1260)

As a result of this analysis, Station 02 was identified as a PCB product. The other 2 drum samples will be analyzed for the full priority pollutant analysis to identify the contents of the drums.

An HNU photoionizer was utilized during the drum sampling assessment. Findings were as follows:

Station 01	2 ppm
Station 02	>20 ppm
Station 03	6 ppm

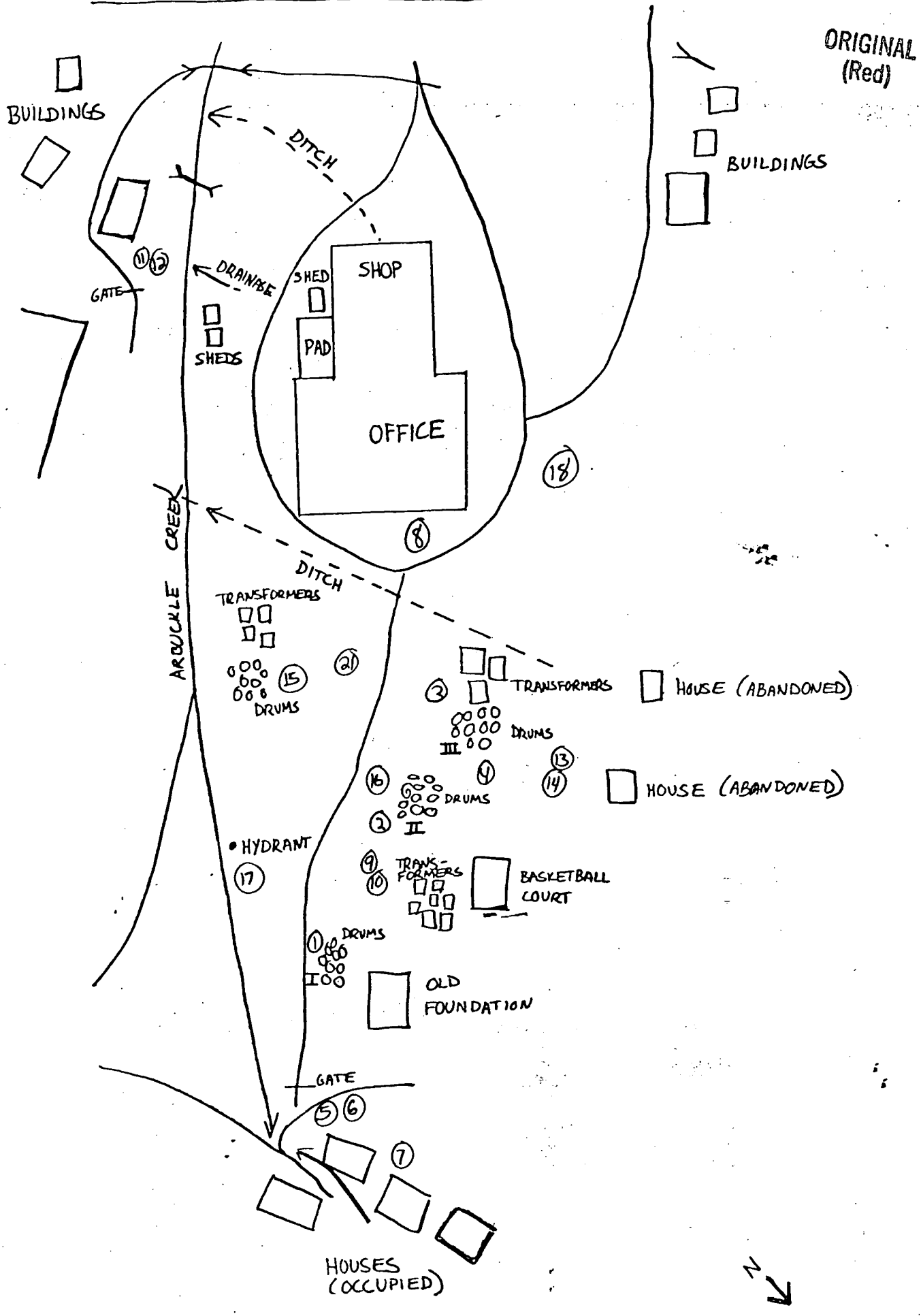
Photographs of the drums and the assessment are attached for reference. In addition, a site sketch indicating the locations of the photographs has been included. Painted markings on drum #1 was "Transformer #55". Drum #2 (which may have been reused) was labeled Dow "Dowtherm 209 Coolant". Drum #3 was bulging on both ends, and no markings were apparent.

The samples are being analyzed by Martel Labs under special project number 8412-S3, 0330. A proper chain-of-custody was utilized during shipment to the laboratory. Proper QA/QC procedures and techniques were pre-arranged prior to analysis and are being utilized by the laboratory.

A site sketch is attached to reference the drum sample locations.

Also attached are pictures of pathways (see photos 4 and 5, 6 and 7) utilized by children passing through the property. Photo #7 shows childrens' toys on site. Although there is a gate, Mrs. Schaeffer has stated children in the surrounding area utilize the property as a throughway.

SCHAFFER ELECTRIC SITE



NUMBERS INDICATE PHOTO #

ROMAN NUMERALS INDICATE DRUM SAMPLE NUMBERS

DRUM INSPECTION LOG

ORIGINAL (Red)

Drum # 1
Project #

Date 12/6/88
Time 11:00

Type of Contents: ___SOLID ✓LIQUID ___SLUDGE ___LAB PACK
___EXPLOSIVE OTHER —

Color Red
Size of Grain —

pH —
___PAPER ___METER

Drum Size: ✓55-gallon ___42-gallon ___30-gallon ___5-gallon
Other

Amount of Contents: ✓Full ✓three-fourths ___one-half
___one-fourth ___less than one-fourth

Sample Method: ✓Pipette ___Trowel Other Glass rod

Drum Markings: "Transformer 55"

Additional Comments: HNU reading 2 ppm
PCB 20 ppm

****

LAYER DESCRIPTION

SINGLE LAYER

LAYERS

Designation	State

FORM B-1

DRUM INSPECTION LOG

ORIGINAL

Drum # 2
Project #

Date 12-6-84
Time ~~12~~ 10:45

Type of Contents: ___SOLID ✓LIQUID ___SLUDGE ___LAB PACK
___EXPLOSIVE OTHER

Color Dark Yellow / Gold Size of Grain

pH ___PAPER ___METER

Drum Size: ✓55-gallon ___42-gallon ___30-gallon ___5-gallon
Other

Amount of Contents: ___Full ✓three-fourths ___one-half
___one-fourth ___less than one-fourth

Sample Method: ✓Pipette ___Trowel Other Glass rod

Drum Markings: Dow Dowtherm 209 Coolant

Additional Comments: 147 ppm PCB H·NU reading >20 ppm

****

LAYER DESCRIPTION

SINGLE LAYER

LAYERS

Designation	State

FORM B-1

DRUM INSPECTION LOG

ORIGINAL (Red)

Drum # 3
Project #

Date 12-6-84
Time 10:30

Type of Contents: ___SOLID ✓LIQUID ___SLUDGE ___LAB PACK
___EXPLOSIVE OTHER

Color light yellow Size of Grain N/A

pH — ___PAPER ___METER

Drum Size: ✓55-gallon ___42-gallon ___30-gallon ___5-gallon
Other

Amount of Contents: ___Full ✓three-fourths ___one-half
___one-fourth ___less than one-fourth

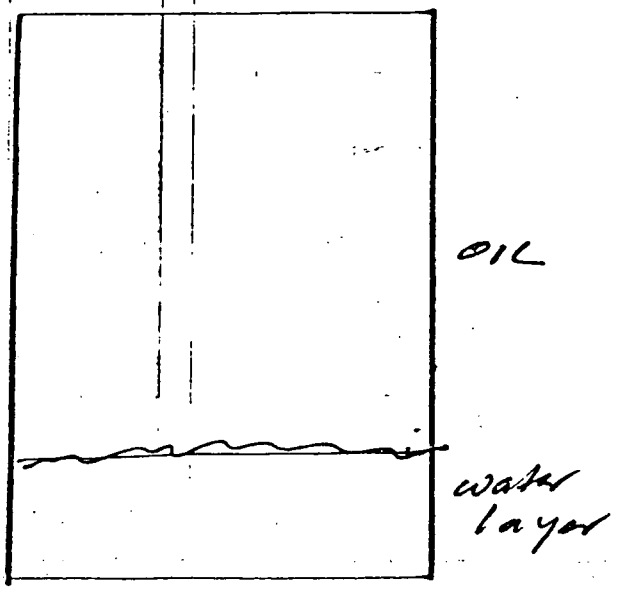
Sample Method: ✓Pipette ___Trowel Other

Drum Markings: None ~~drum~~

Additional Comments: Drum bulging & rusting.
H. NV 6.0 ppm / 5.4 ppm PCB

****

LAYER DESCRIPTION



LAYERS

Designation	State
on	Liquid
H2O	Liquid

FORM B-1

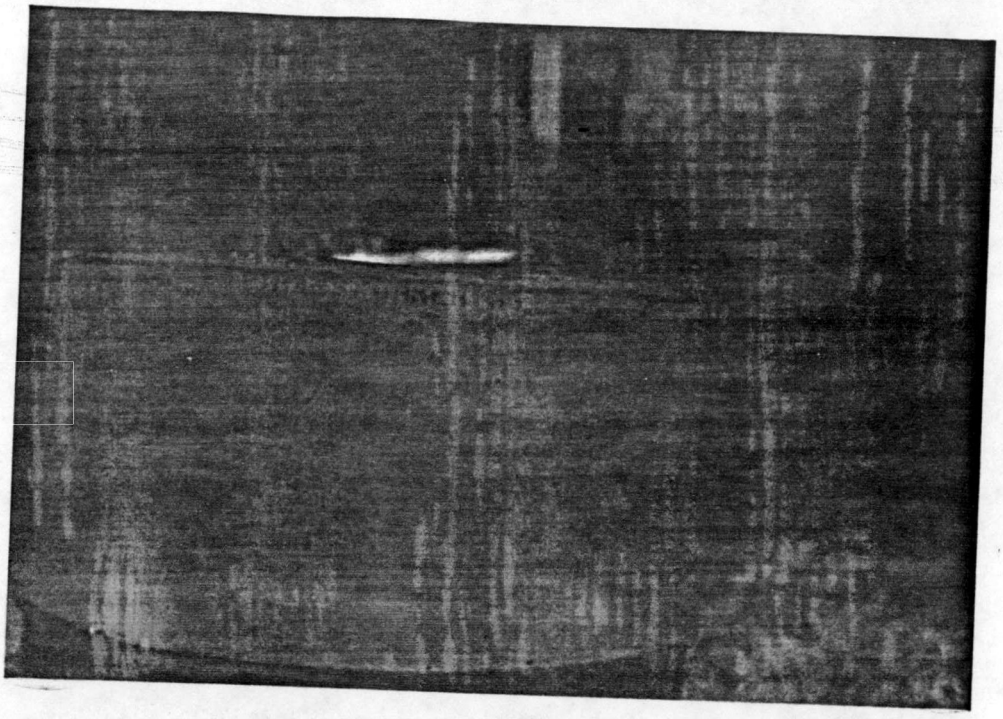


Photo #1 "Transformer 55" (Station 01)
Drum marking indicating transformer fluids.

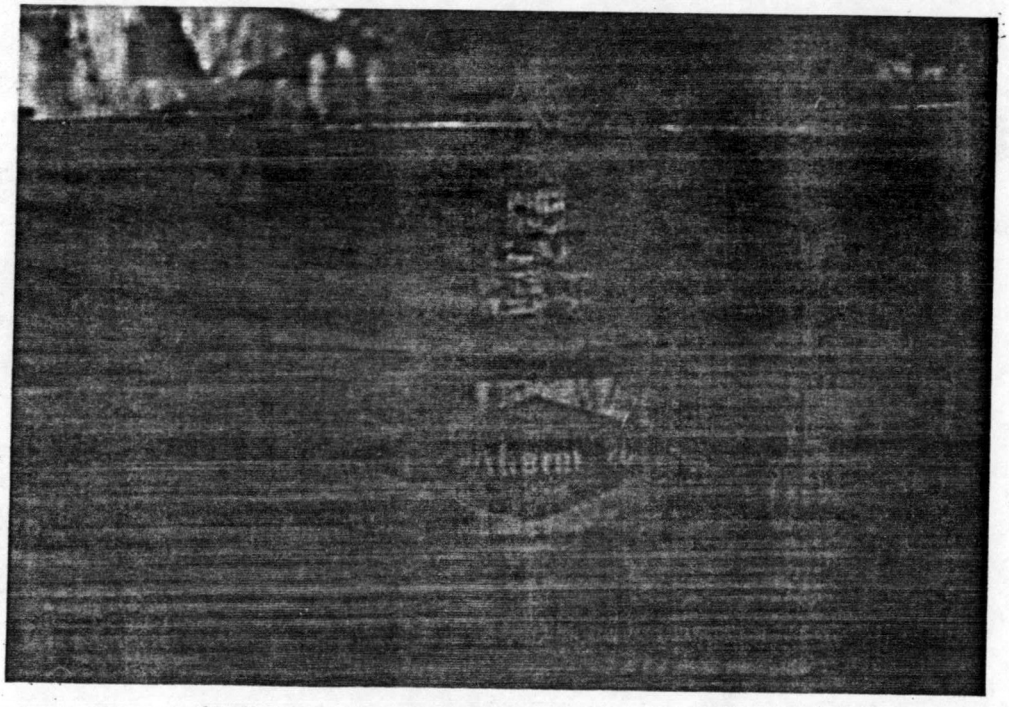


Photo #2 Dowtherm 209 (Station 02)
Coolant
PCB (Archlor) indicated 147 ppm.

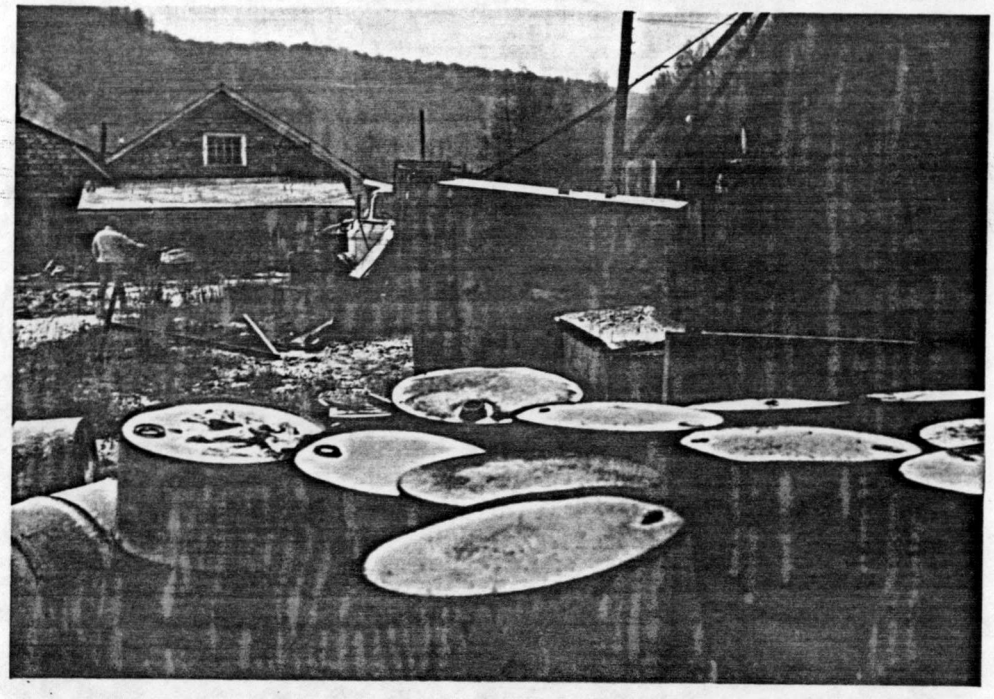


Photo 3: Bulging drum (Station 03)
PCB analysis indicated 5.7 ppm arclor.

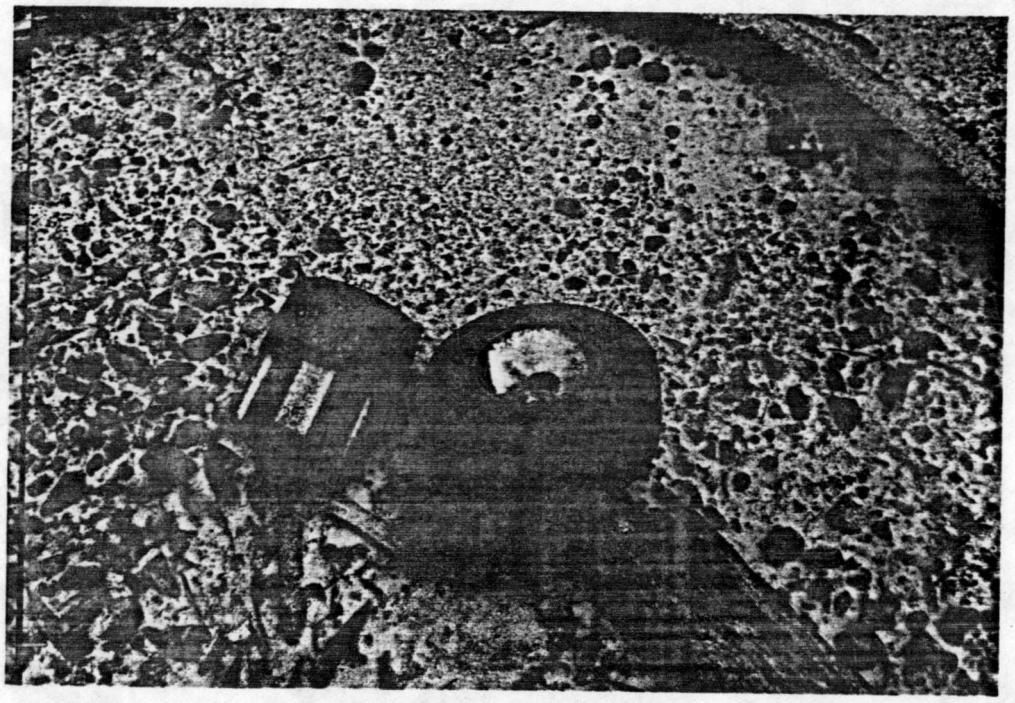
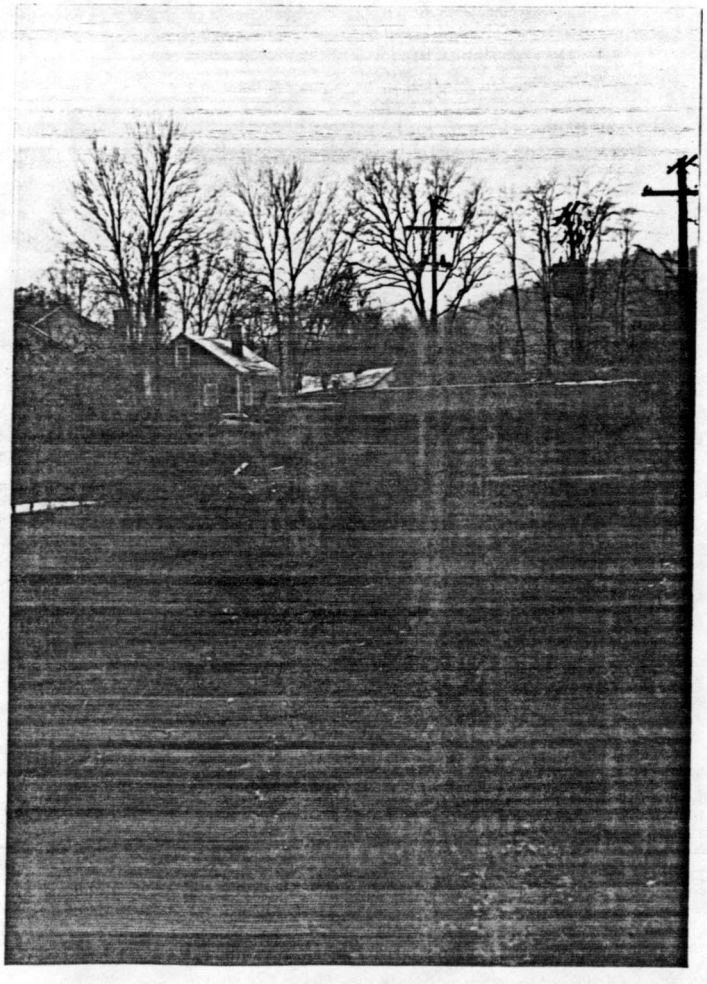


Photo 4: Children's toys on site.

Photo 5 and 6: Pathways utilized by neighboring children as a thru-way and playground.

Close proximity of site in relation to residents.



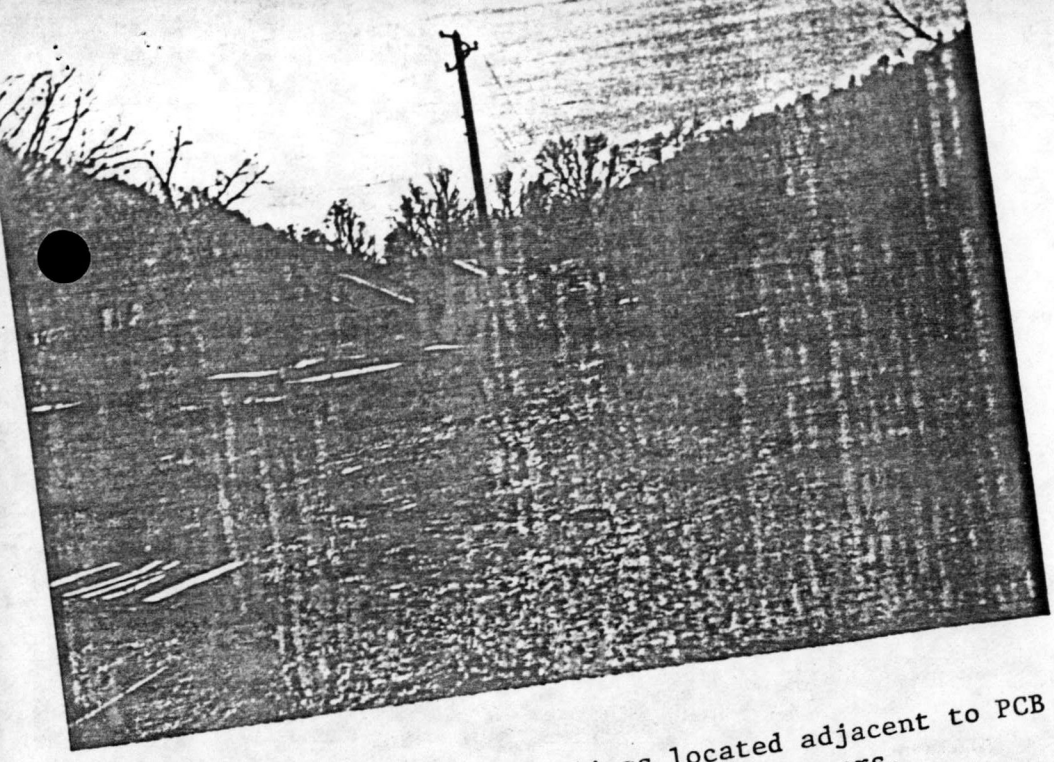


Photo #7 Residential dwellings located adjacent to PCB contaminated soils and transformers.

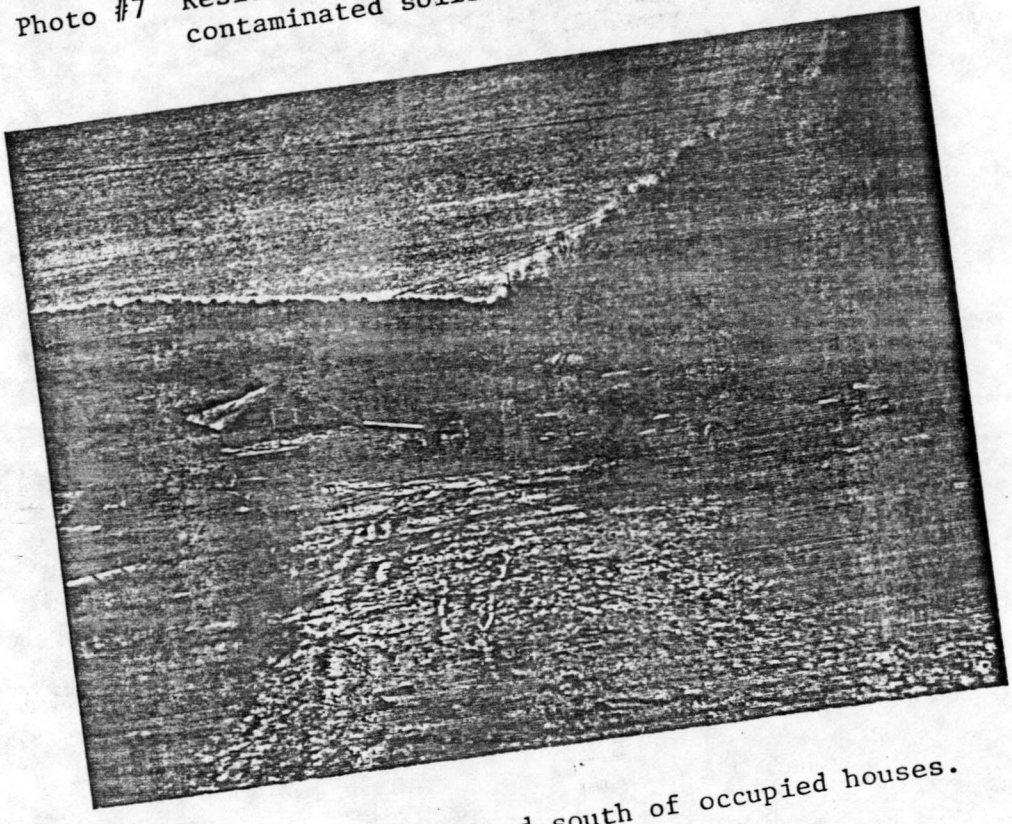
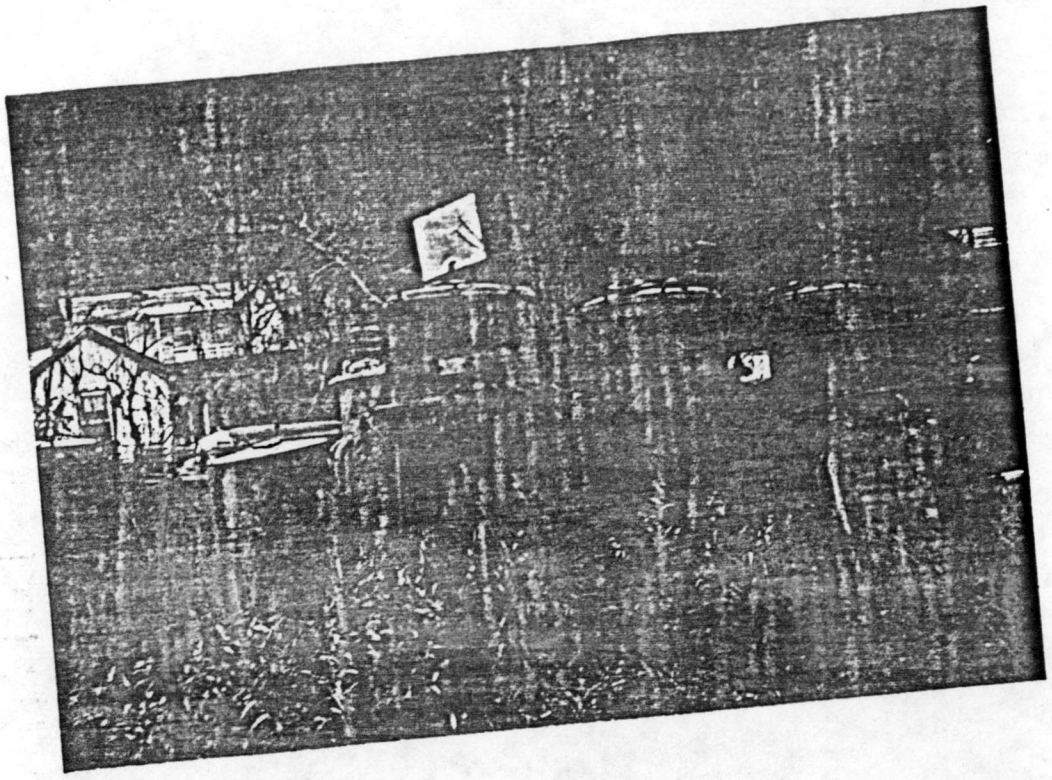
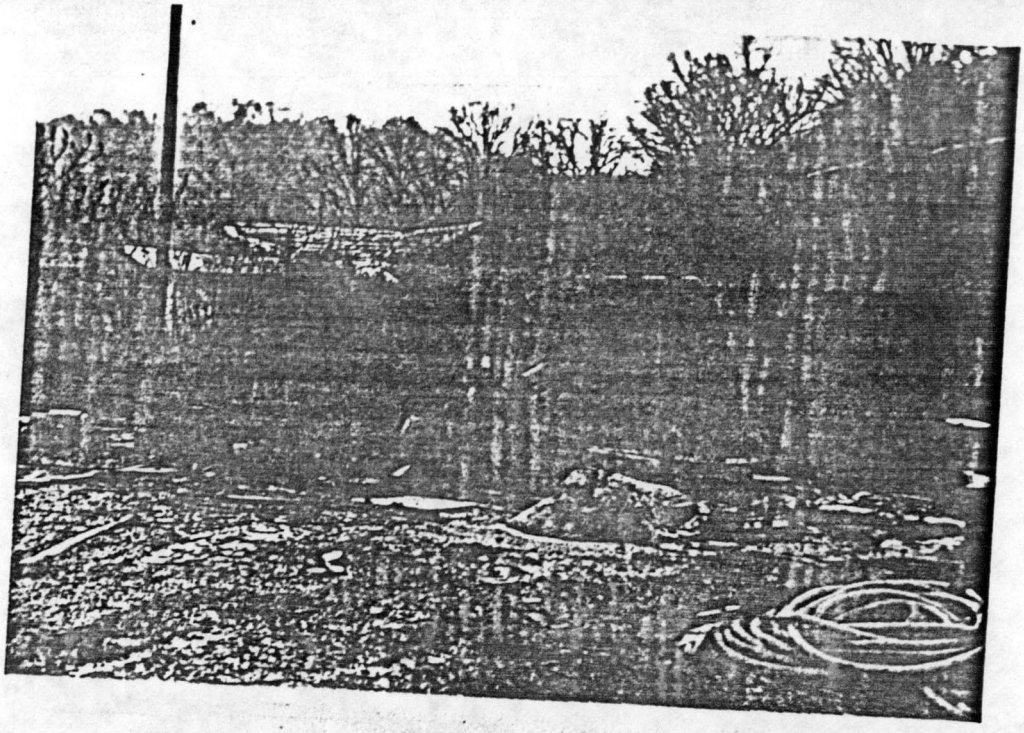


Photo #8 Office located south of occupied houses.



Photos 9 and 10: Transformers



Photos 11 and 12: Transformers and capacitors

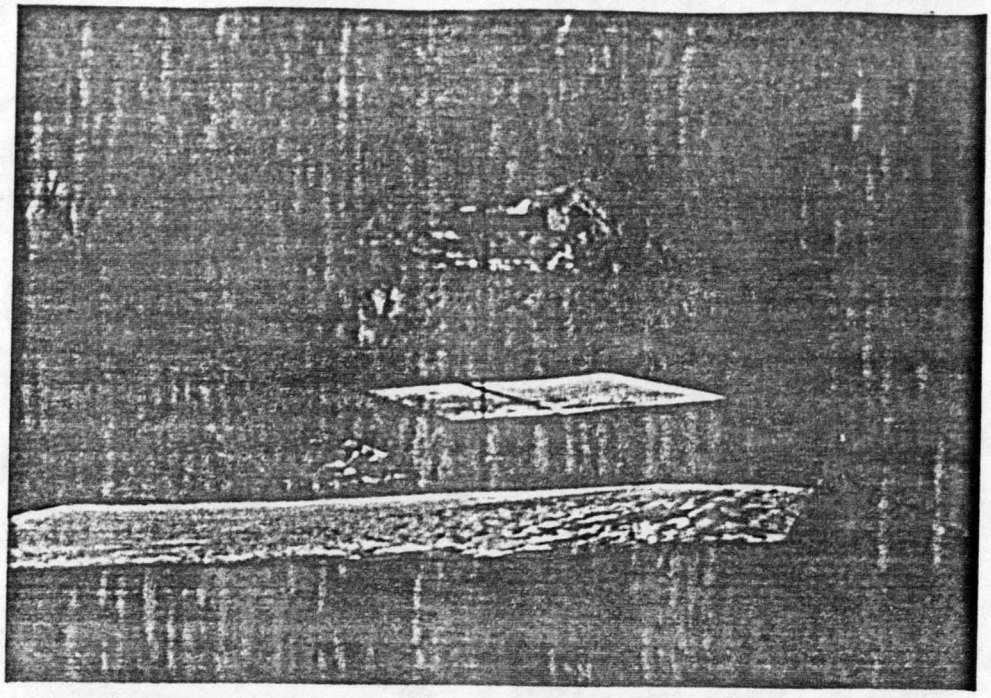


Photo #13: Capacitors casings strewn randomly on site.

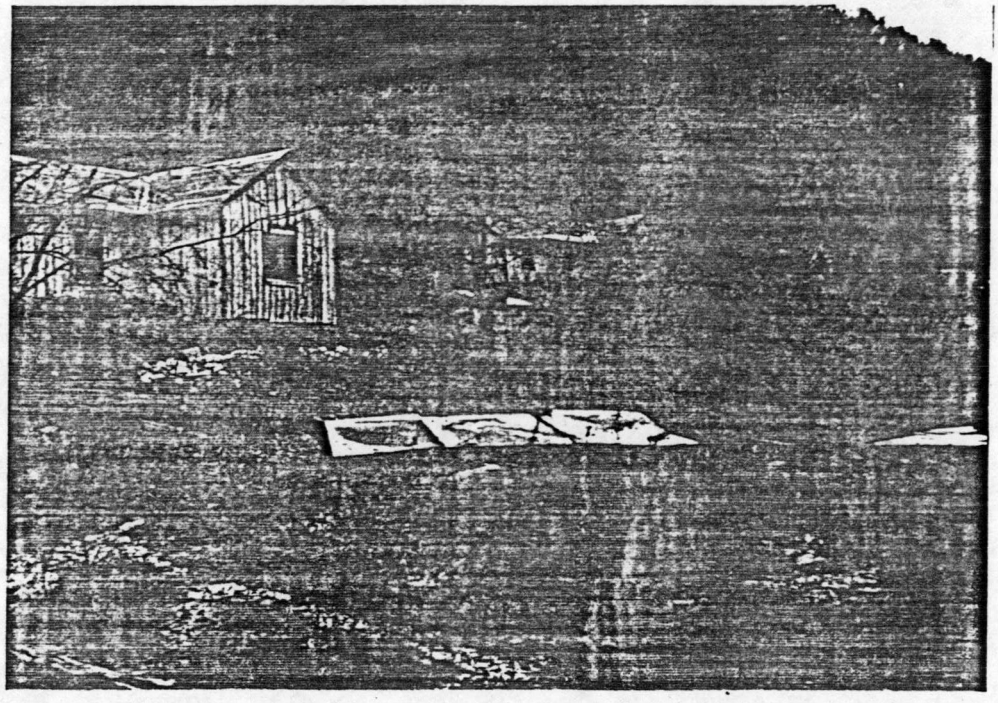


Photo #14: Capacitors casings randomly strewn on site.
A trash dump is being started and used by residents.

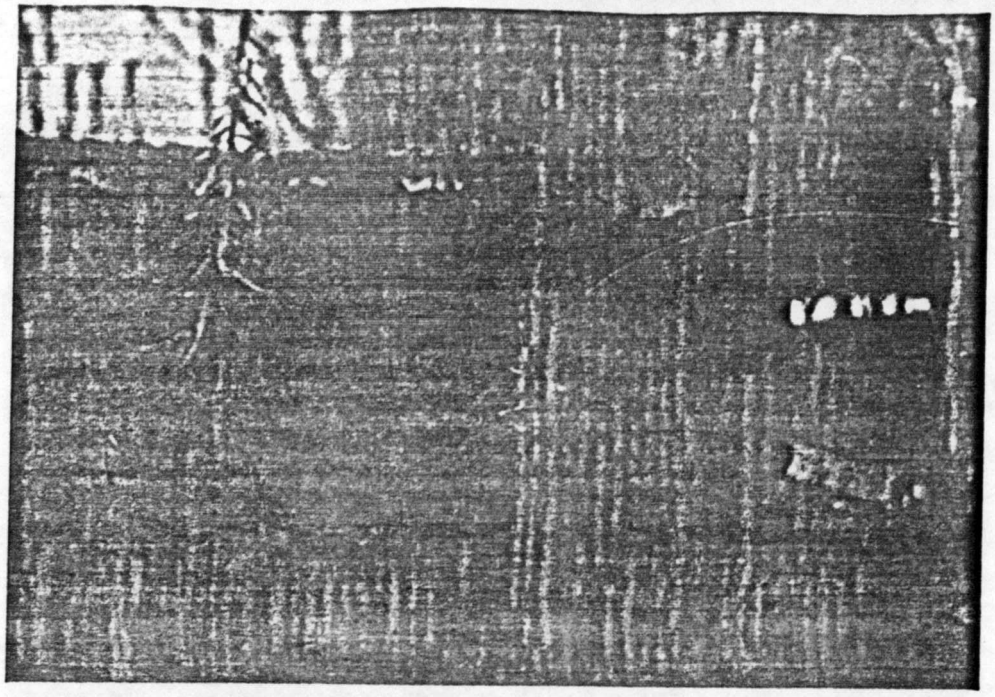


Photo #15: Sodium Nitrate/Nitrite drums are partially buried (fertilizer)

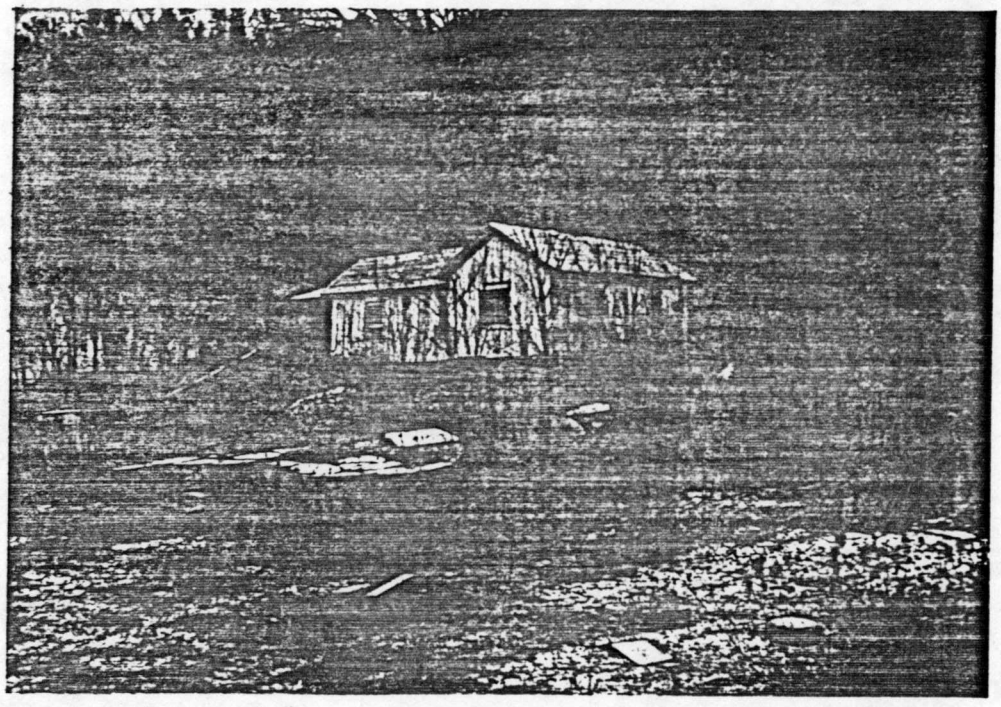


Photo #16: Miscellaneous drums accumulated on site.

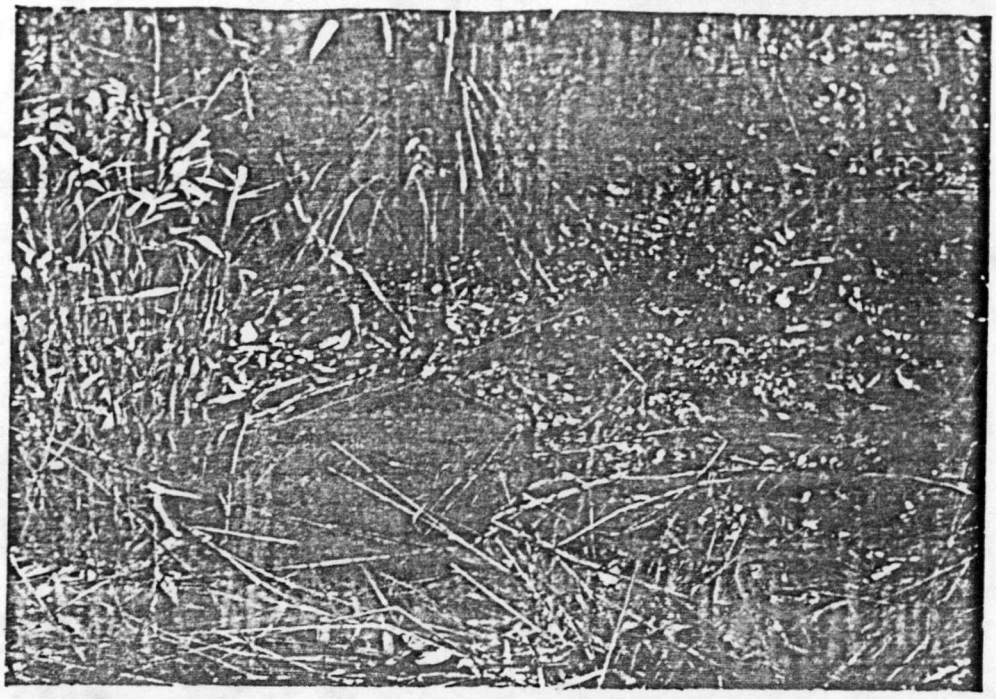


Photo #17: Oily residues in the ground.

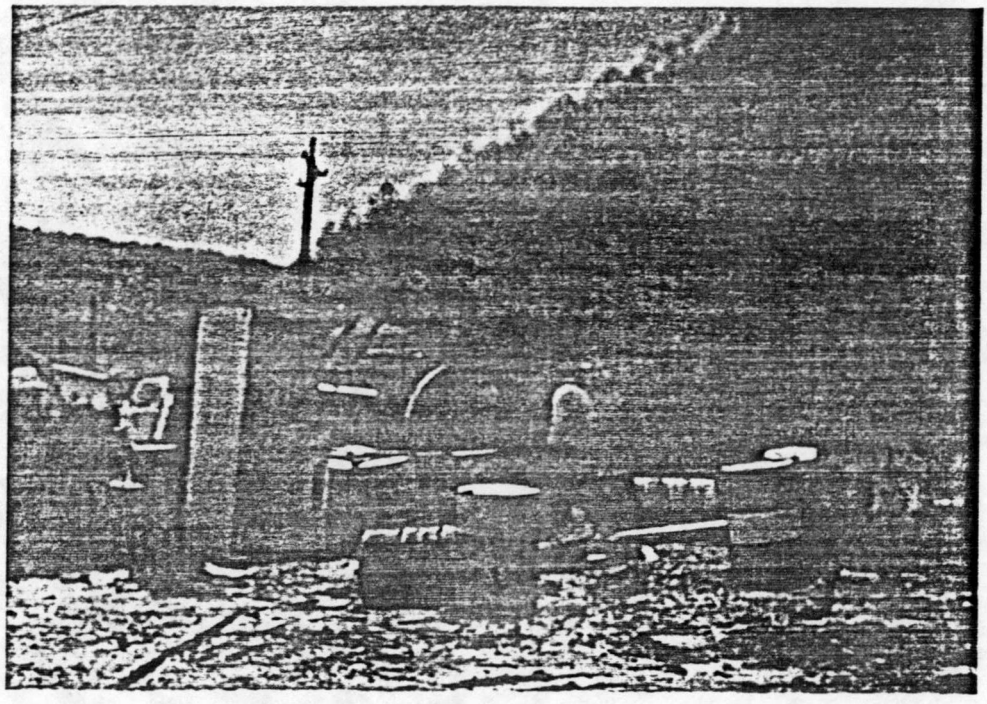
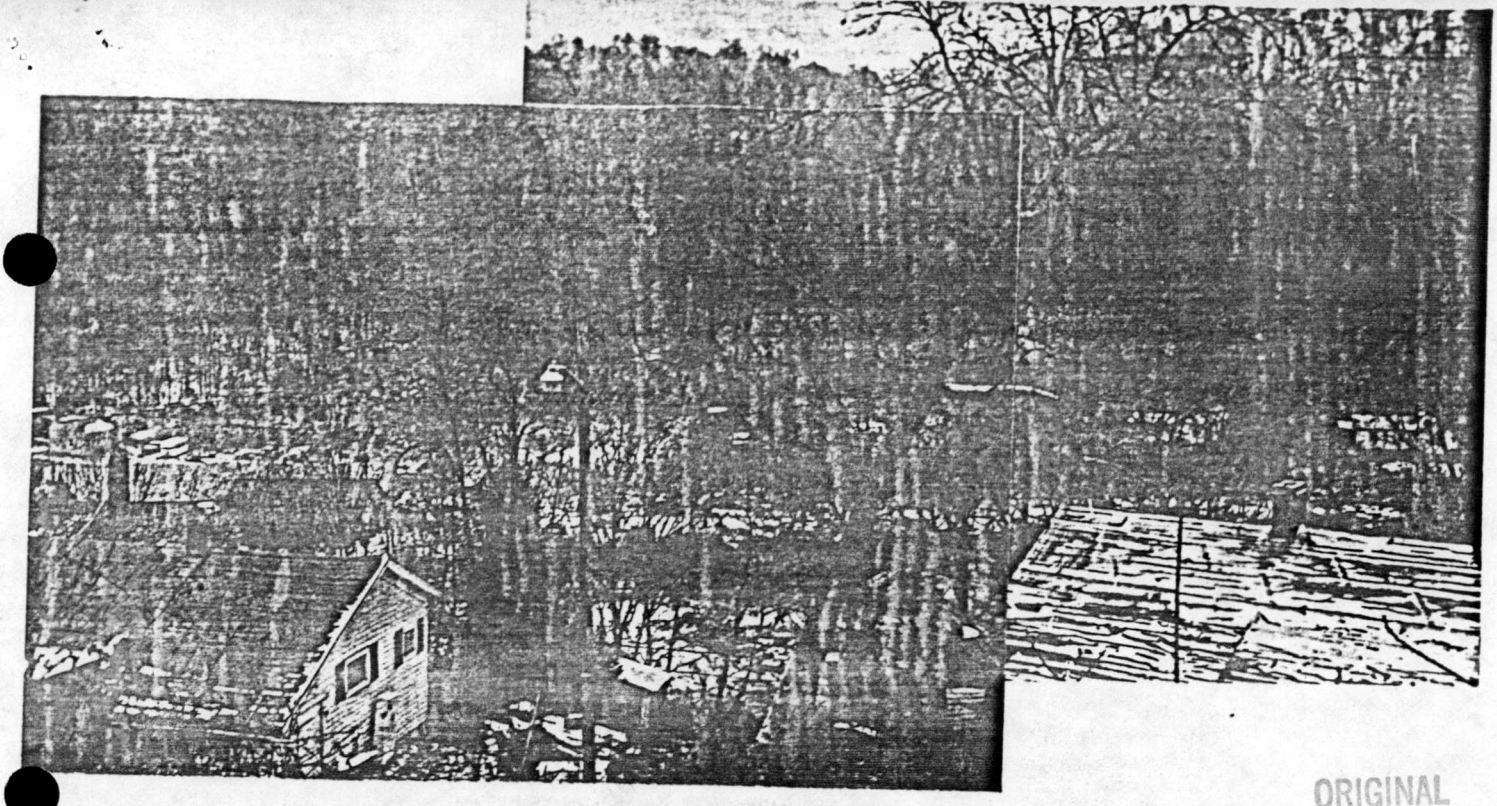


Photo #18: Preliminary assessment.



ORIGINAL
(Red)

Photo 19: Overview at site.

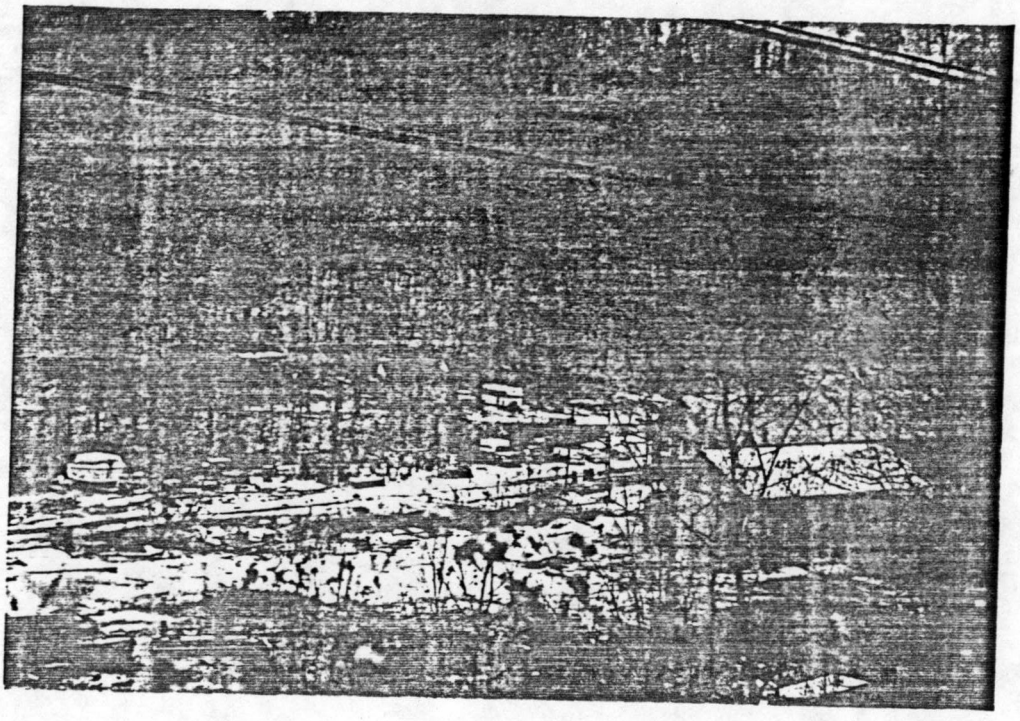


Photo #20: Site overview office, shop, good staged transformers and capacitors.

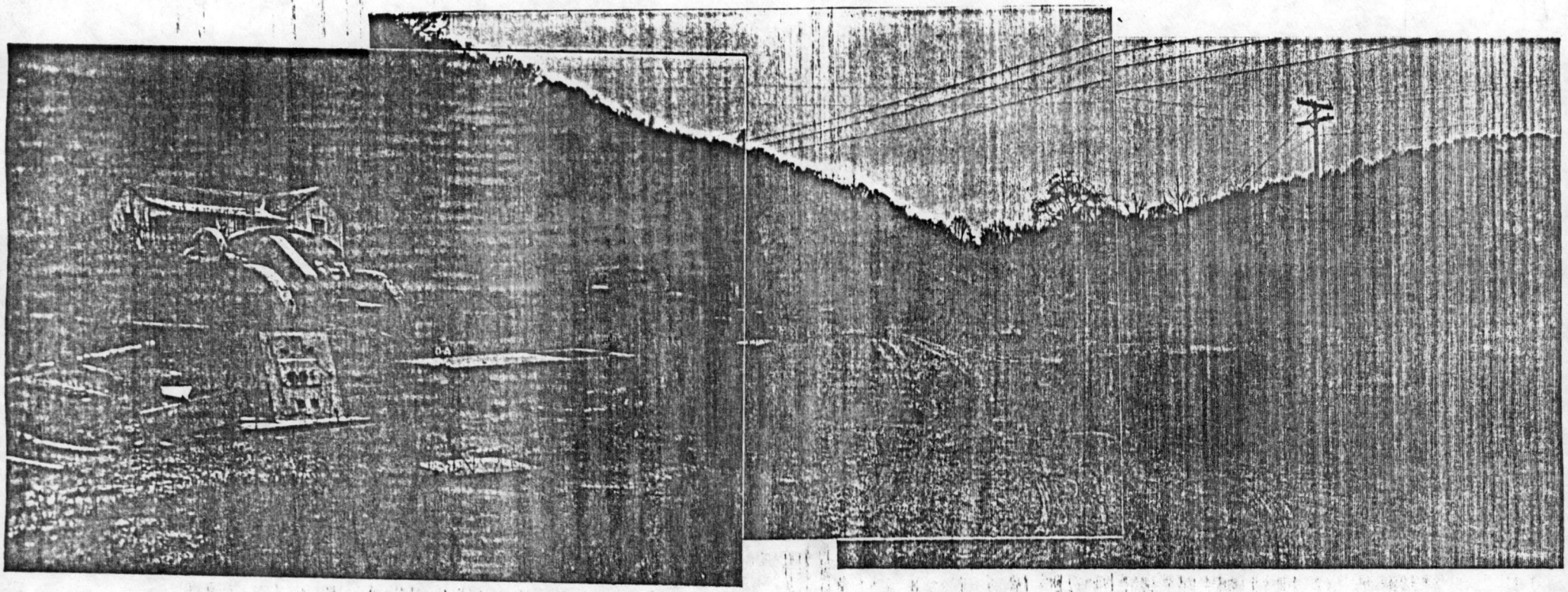


Photo 21: Wide angle overview of site. Transformers, drums, capacitors, contaminated soils, close residents.

ORIGINAL
(Red)

Suite 3, [illegible] Central Highway, Pennsauken, NJ [illegible]109 • (609) [illegible]

TECHNICAL ASSISTANCE TEAM FOR EMERGENCY RESPONSE REMOVAL AND PREVENTION
EPA CONTRACT [illegible]

MEMORANDUM

TO: Benton Wilmoth, OSC, U.S. EPA Region III

FROM: (b) [redacted] TAT, Region III

TDD# 8410-05

DATE: 10/23/84

PCS# 3005

SUBJECT: Preliminary Assessment - Schaffer Electric Company PCB Site in Minden, West Virginia

Background

West Virginia Department of Natural Resources (DNR) inspector Leroy Gilbert discovered the Schaffer Electric Company (SECO) Site in late September 1984. During his initial inspection he observed several hundred transformers and capacitors in close proximity to the small coal camp of Minden, West Virginia. A four point composite and a grab sample from the drainage ditch to Arbuckle Creek were collected. The samples revealed 26,749 ppm PCB and 1,136 ppm PCB respectively.

Findings

On October 3, 1984 TAT members (b) (4) [redacted], (b) [redacted] and (b) (4) [redacted] met with West Virginia DNR inspectors Leroy Gilbert and Rob Jelacic. The assessment team met with the property owner and secured permission to conduct the assessment. Schaffer Electric Company is an operating firm that builds electricl substations for the local coal mining industry. Many of their units incorporated various sizes of transformers, capacitors, switches and other voltage regulation/distribution devices. Mrs. Schaffer instructed her forklift operator to separate the useable transformers in the yard from the ones they had no use for. The operator initiated this operation while the assessment team was present.

A total of approxiately 150 transformers and 50 capacitors were observed. Most of the capacitors were laying on their sides. Several capacitors had broken insulators with heavy oil spillage in the vicinity. Evidence that at least 2 transformers were initially filled with PCB fluids was obtained from nameplate inspections; "chlorextol" and "pyranol" labels were observed.

A total of 8 soil/sediment samples were obtained during the assessment. Sediment samples were taken in Arbuckle Creek upstream and downstream of the confluence of the main drainage ditch. In the main capacitor spillage area, a surface sample and a 12" core sample were obtained. Both samples were saturated with oil. The remaining samples were taken throughout the site

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The samples were packed into a cooler and transported to the TAT Region III office. Chain-of-custody protocols were followed throughout transport and shipping of samples.

All samples were shipped to Martel Laboratories in Baltimore, Maryland for rapid turnaround PCB analysis using EPA method 8080. Verbal results are expected by 10/30/84.

Attachments:
1) Site sketches
2) Chain-of-custody
3) Photographs

Meeting w/ EPA OEM, TAT, B. Carson, S. Insalaca [redacted] July 23 1986

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140,000 gallons H2O in 1500 cu yds.

A. Molecular sieve –

B. Carbon – recycling of solvent

C. Dual stage distillation

0-25 ppm in Dry soil –

7 1/2 x 10 ton/hr = 12 hr } DAY
24 hr

and volume of 15 yrs

Presortment – manual, mechanical

Drying –

Condenser – negative pressure

200,000 lbs. carbon =

1.0 mil Ensco to Burn

1.5 mil Cost figure to work on.

2 week time period = 2 Million exemption money available.

Industrial Hygiene surrounding unit — OK

Site perimeter Field Trial — ERT/NOAA/TAT

Graphic presentation of unit.